

REMARKS

Favorable reconsideration and allowance of the subject application are respectfully requested in view of the following remarks.

Summary of the Office Action

Claims 1, 3-5, and 8 stand rejected under 35 U.S.C. §102(e) as being anticipated by *Ogasawara et al.* (U.S. Patent No. 6,151,154).

Claims 2 and 6 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Ogasawara et al.* in view of *Matsuura* (U.S. Patent No. 6,510,111).

Claim 7 stands rejected under 35 U.S.C. §103(a) as being unpatentable over *Ogasawara et al.* in view of *Ootaki et al.* (U.S. Patent No. 5,936,923).

Summary of the Response to the Office Action

Applicants have amended claims 1-4 by this amendment. Claims 1-8 remain currently pending.

Claim Rejection Under 35 U.S.C. §102(e)

Claims 1, 3-5, and 8 stand rejected under 35 U.S.C. §102(e) as being anticipated by *Ogasawara et al.* To the extent that this rejection might be applied to the claims, as newly-amended, it is respectfully traversed for at least the following reasons.

Applicants respectfully submit that *Ogasawara et al.* does not disclose every feature of newly-amended claims 1, 3-5, and 8. For instance, it is respectfully submitted that *Ogasawara et al.* fails to disclose the claimed combination as set forth in independent claim 1, as newly-amended, including at least “a phase device for providing the light beam having been reflected from the information recording medium with a polarization phase difference between an inner light beam and an outer light beam so as to decrease optical interference between the 0-th order

light and the diffracted light of the reflected light beam, the inner and outer light beam being inner and outer radius portions of the reflected light beam, respectively,” and “detecting portion which detects the inner light beam and the outer light beam to generate at least one of focusing error signal and an aberration error signal of the light beam based on the detected inner and outer light beams.”

In contrast to the claimed combination as a whole, the aberration correction unit of *Ogasawara et al.* employs “pattern electrodes” for the purposes of correcting or canceling wavefront aberration. In particular, the liquid crystal panel (3) of *Ogasawara et al.* has a plurality of pattern electrodes (or division electrodes 31-38) corresponding to a radial pattern in the outer peripheral region, and the plurality of division electrodes (31-38) are applied with voltages to correct wavefront aberration caused in the optical beam. See column 12, lines 49-67, Fig. 5 and Fig. 11 of *Ogasawara et al.*

In addition, according to *Ogasawara et al.*, the wavefront aberration can be corrected by providing a phase difference (i.e., difference in optical path length) between the light portions passing through the division areas. Specifically, *Ogasawara et al.* discloses changing the refractive indices of the plurality of division areas of the liquid crystal, since the refractive index change generates optical path differences between the division areas of the liquid crystal. See, for example, column 2, lines 1-7 and column 10, lines 4-10 of *Ogasawara et al.*

On the other hand, according to an embodiment of the instant invention as claimed, a phase device provides a polarization phase difference between an inner light beam and an outer light beam. The polarization phase difference is a relative phase difference in polarization between the light beams, and is irrelevant to and independent of a light phase (i.e., optical path length).

For example, the phase device of a preferred embodiment of the instant invention provides the phase difference Δ , which is equal to $(2m + 1) \times \lambda/2$, in the polarizing direction between the lights passing through the first phase area ARI and the second phase area ARO. See, for example, page 20, lines 12-21 of the specification. Accordingly, the interference by the ± 1 order diffracted light which is caused by diffraction by the information recording medium can be suppressed. Further, for example, Fig. 15 of the instant application illustrates a diffraction pattern of a 0-th order light and ± 1 order diffracted lights. The polarizing directions of the inner light RMBi(0) of the 0-th order light RMB(0) and the inner light portions RSBi(+1) and RSBi(-1) of the ± 1 order diffracted light are equal. Similarly, the polarizing directions of the outer light portions RMBo(0), RSBo(+1) and RSBo(-1) are equal. Here, the polarizing directions of the inner and outer light portions are adjusted to be different by the phase difference $\Delta (= \lambda/2)$. See, for example, page 27, lines 2-19 of the specification. Accordingly, the inner light RMBi(0) of the 0-th order light and the outer light RSBo(+1) of the +1 order diffracted light do not interfere in the overlapped portion YI' (shown as cross-hatched portion in Fig. 15). In a similar manner, the 0-th order inner light RMBi(0) and the -1 order diffracted outer light RSBo(-1) do not interfere in the overlapped portion XI' (shown as cross-hatched portion in Fig. 15). Therefore, the adverse effect due to the interference of the 0-th order light and ± 1 order diffracted light can be reduced, thereby a focusing error and an aberration error signals of high-linearity can be obtained with high precision. See, for example, page 40, lines 10-20 of the specification.

M.P.E.P. § 2131 states “[t]o anticipate a claim, the reference must teach every element of the claim.” Applicants respectfully submit that since *Ogasawara et al.* does not teach or suggest all of the features of independent claim 1, as newly-amended, *Ogasawara et al.* does not

anticipate claim 1. Further, since claims 3-5 and 8 depend from claim 1, it is respectfully submitted that *Ogasawara et al.* also does not anticipate claims 3-5 and 8. Accordingly, withdrawal of the rejection of claims 1, 3-5 and 8 under 35 U.S.C. §102(e) is respectfully requested.

Claim Rejections Under 35 U.S.C. §103(a)

Claims 2 and 6 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Ogasawara et al.* in view of *Matsuura*. Claim 7 stands rejected under 35 U.S.C. §103(a) as being unpatentable over *Ogasawara et al.* in view of *Ootaki et al.* To the extent that these rejections might be applied to the claims, as newly-presented, they are respectfully traversed for at least the following reasons.

It is respectfully submitted that *Matsuura* and *Ootaki et al.* are not relied upon to teach or suggest a phase device, and do not remedy the above-mentioned deficiencies of *Ogasawara et al.* with regard to the rejection under 35 U.S.C. §102(e). Thus, at least because claims 2, 6 and 7 depend from claim 1, and because the applied references, whether taken separately or in combination, fail to teach or suggest every feature of claims 2, 6 and 7, Applicants respectfully submit that the applied references fail to render claims 2, 6 and 7 unpatentable. Accordingly, withdrawal of the rejections under 35 U.S.C. 103(a) of claims 2, 6 and 7 are respectfully requested.

Conclusion

In view of the foregoing, withdrawal of the rejections and allowance of the pending claims are earnestly solicited. Should there remain any questions or comments regarding this response or the application in general, the Examiner is urged to contact the undersigned at the number listed below.